

Do Now:

Given the function $f(x) \begin{cases} 2x + 6, & x \leq -4 \\ -4, & x > -4 \end{cases}$

Evaluate

1) $f(-2) = -4$ 2) $f(-6) = 2(-6) + 6 = -6$ 3) $f(10) = -4$

$$f(-6) = 12 + 6$$

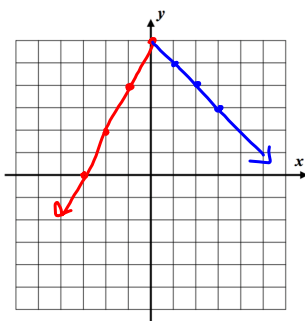
$$f(-6) = -6$$

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1)

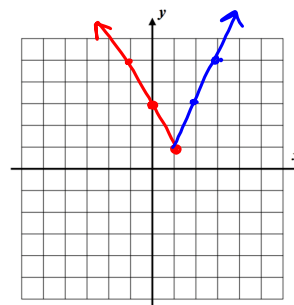
a. $f(4) = 2$ $f(-3) = 0$

x	y
-3	0
-2	2
-1	4
0	6
1	5
2	4
3	3



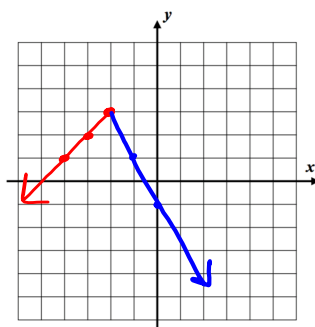
3)

x	Y
-2	7
-1	5
0	3
1	1
2	3
3	5
4	7



2)

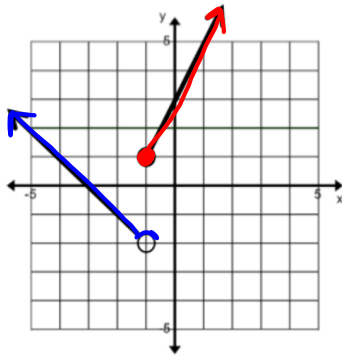
x	Y
-5	0
-4	1
-3	2
-2	3
-1	1
0	-1
1	-3



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Write the equation for each function whose graph is shown.

4)



$m = 2$

Restricted Domain

$b = 3$

$x \geq -1$

$y = 2x + 3$

$m = -1$

Domain

$b = -3$

$x < -1$

$$f(x) = \begin{cases} 2x + 3 & \text{if } x \geq -1 \\ -x - 3 & \text{if } x < -1 \end{cases}$$

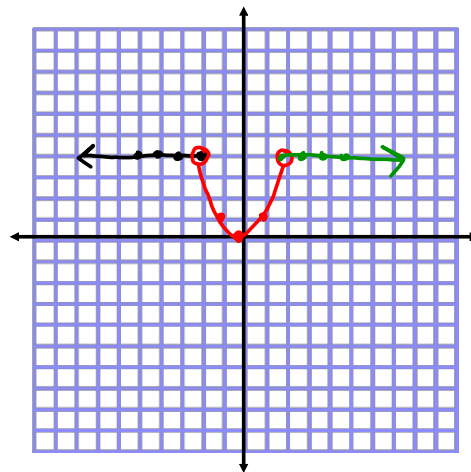
$y = -x - 3$

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$$10. f(x) = \begin{cases} 4, & x \leq -2 \\ x^2, & -2 < x < 2 \\ 4, & x \geq 2 \end{cases}$$

x	$f(x) = 4$ $x \leq -2$	(x,y)
-2		4
-3		4
-4		4
-5		4

x	$f(x) = x^2$ $-2 < x < 2$	(x,y)
-2		4
-1		1
0		0
1		1
2		4



x	$f(x) = 4$	(x,y)
2		4
3		4
4		4
5		4

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